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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,034	12/14/2000	Werner Obrecht	Mo-5842/LeA 34,092	4130
34947	7590	05/17/2006		
LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112				
EXAMINER SERGENT, RABON A				
ART UNIT		PAPER NUMBER		

1711

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/739,034	OBRECHT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rabon Sergent	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10,15 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10,15 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 27, 2006 has been entered.
2. Applicants' amendment of February 27, 2006 does not comply with the requirements of 37 CFR 1.121 in that subject matter has been improperly deleted from the claims. Deleted subject matter must be denoted by strikethrough or double bracketing.
3. The terminal disclaimer filed on January 27, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. 6,908,965 has been reviewed and is accepted. The terminal disclaimer has been recorded.
4. Claims 1, 2, 4-10, 15, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within claim 1, the "crosslinking agent" is not mutually exclusive from the multifunctional isocyanate (C), since they both perform the same function of crosslinking, especially in view of the fact that applicants' crosslinked rubber particles are specifically claimed to have functional groups that will react with the multifunctional isocyanate.

5. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, it is unclear what constitutes "methacrylates of polyhydric".

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Secondly, it is unclear how C<sub>2</sub>-C<sub>10</sub> alcohols perform a crosslinking function, since these compounds are assumed to be monofunctional.

Lastly, it is unclear what is meant by "sorbitol with unsaturated polyesters of aliphatic diols and polyols". It cannot be determined if applicants are simply claiming a mixture of these compounds or a reaction product.

6. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Adequate support has not been found for the species, methacrylates of polyhydric and C<sub>2</sub>-C<sub>10</sub> alcohols.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 1, 2, 4-10, 15, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obrecht et al. ('488) or DE 19701487, each in view of Dammann et al. ('531) or JP 57-212239 or JP 5-17630.

The primary references disclose rubber mixtures comprising double bond containing rubber and crosslinked rubber particles having applicants' claimed properties, wherein the mixtures are useful for producing vulcanisates and molded articles. See abstracts. Applicants' claimed crosslinking agents are disclosed at column 4, lines 34-50 of Obrecht et al. and within the abstract (fillers and processing aids) and page 2, lines 50+ of DE 19701487. Though the primary references are silent regarding the addition of a polyisocyanate component to the composition, the use of polyisocyanates within rubber mixtures to improve physical properties was known at the time of invention. This position is supported by the teachings of the secondary references. The secondary references disclose that polyisocyanate containing rubber formulations display excellent moldability and bonding resistant to heat and humidity. See abstracts.

9. Therefore, it would have been obvious to incorporate polyisocyanates within the rubber mixtures of the primary references, so as to produce rubber compositions having the improved moldability and bonding characteristics taught by the secondary references.


10. The examiner has carefully reviewed the arguments set forth within applicants' response; however, applicants' arguments are deemed to be insufficient for the following reasons. Firstly, applicants' arguments with respect to claims 1, 2, 4-10, 15, 20, and 21 are not commensurate in scope with applicants' claims. These claims do not require a sulfur cure system; in fact, the instantly claimed crosslinking agent is met by a polyfunctional isocyanate, as disclosed by the

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secondary references. Secondly, despite applicants' arguments, Dammann et al. clearly allows for the presence of sulfur or sulfur based accelerators with the crosslinked rubbers, uncrosslinked rubbers, and isocyanates. See column 2, line 25 through column 3, line 51, especially column 3, lines 49 and 50. Applicants have seemingly ignored this teaching within Dammann et al. Furthermore, applicants' arguments concerning the distinction between vulcanizate and adhesive are without merit. The claims are not limited to vulcanizate; applicants have not defined vulcanizate; and despite applicants' arguments, applicants have provided no evidence that vulcanizates and adhesives are mutually exclusive. Furthermore, applicants have shown no distinction between the argued adhesives and "rubber mixtures". The examiner is not aware of any specific qualities or properties unique to "rubber mixtures" that distinguish them from other compositions or mixtures that comprise rubber. Additionally, there is nothing on the record to support applicants' opinion that the argued adhesives are not vulcanizable, especially in view of the fact that Dammann et al. specifically disclose compounds that will function as applicants' claimed crosslinking agent. Lastly, it is not seen how applicants' summary of JP 57-212239 or JP 5-17630 addresses the examiner's rejection.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent  
May 15, 2006



**RABON SERGENT**  
**PRIMARY EXAMINER**